



# Forest Health Protection

## Pacific Southwest Region

**Lat 40.21799 Lon -122.27612**

**File Code: 3420**

**Date: January 21, 2010**

**To:** Forest Supervisors (Eldorado, Inyo, Lassen, Plumas, Modoc, San Bernardino, Shasta-Trinity, Sierra, Stanislaus, Sequoia and Tahoe National Forests and the Lake Tahoe Basin Management Unit), Park Superintendents (Sequoia Kings Canyon and Yosemite National Parks), Field Managers (Bureau of Land Management, Eagle Lake and Alturas Field Offices), and Deputy Director (CAL FIRE Resource Management)

**Subject:** Douglas-fir Tussock Moth Pheromone Detection Survey 2009 Report (NE10-05)

Enclosed are the results of the 2009 cooperative Douglas-fir tussock moth (DFTM) pheromone detection survey (Table 1). Participation in this effort includes the US Forest Service, CAL FIRE, Bureau of Land Management and the National Park Service. In summary, traps were installed in 159 plots (5 traps/plot) with 93% reporting. All plots averaged < 25 males per trap and all plots except three averaged < 10 males per trap. These numbers are very similar to last year, which had the lowest trap count of the past 13 years. While there was no DFTM caused defoliation detected within our monitoring areas in 2009, approximately 200 acres of defoliation were observed on the San Bernardino National Forest (Figure 1). White fir was primarily defoliated but high densities of caterpillars were also observed feeding on Jeffrey pine. The last known activity of Douglas-fir tussock moth in the San Bernardino Mountains occurred in the early 1970's.

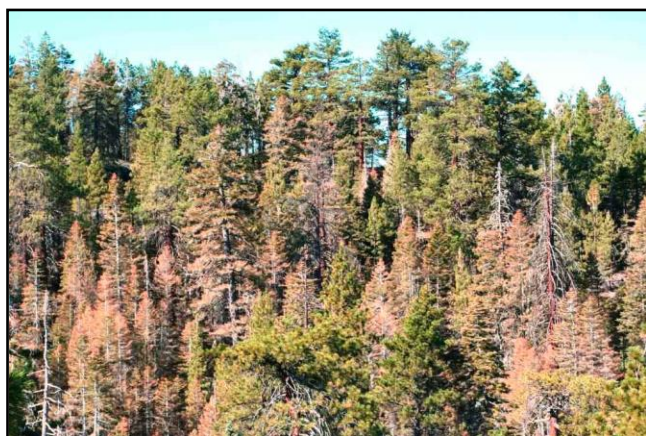


Figure 1. Douglas-fir tussock moth caused defoliation, San Bernardino NF

When male DFTM numbers reach > 25 males per trap, follow up egg mass and/or larval density surveys are conducted to determine the probability of subsequent conifer defoliation (primarily white fir, *Abies concolor*, in California). This information is provided to land managers in a timely manner in order to assess the potential impacts to natural resources and facilitate any suppression strategies that may be implemented, such as aerial applications of insecticides.

Increases and declines in trap counts are very common with DFTM populations. Based on the results of the 2009 trap monitoring, there should be very few, if any, areas where defoliation is detected in 2010 (except for the San Bernardino Mountains). Forest Health Protection and/or



CAL FIRE Pest Management staff will conduct additional monitoring if any defoliation is detected this summer, with affected acres being reported to the appropriate land managers. Field going personnel are urged to continue to check for evidence of feeding and defoliation on white fir throughout the susceptible host type this coming summer and fall and report any findings to your forest health contacts (Appendix A).

Sufficient trapping materials have been ordered for the detection survey plots for 2010 and will be distributed to cooperators in June or July of this year. Updates on population monitoring will be distributed to land managers as needed. Forest Health Protection appreciates the continued cooperation from all agencies in this ongoing west-wide survey effort and especially thanks the following DFTM Detection Survey cooperators:

Don Owen, CAL FIRE, Redding  
Tom Smith, CAL FIRE, Davis  
Jim Kral, CAL FIRE, Visalia  
David Shy, CAL FIRE, Tulare  
Tom Warner, NPS, Sequoia Kings Canyon  
Bob Meadows, NPS, Sequoia Kings Canyon  
Brian Mattos, NPS, Yosemite  
Wade Salverson, BLM, Susanville  
Peter Hall, BLM, Alturas  
Cathy Carlock, Modoc NF  
Barbara Bryan, Modoc NF  
Susan Wilcox, Lassen NF  
Erin Ernst, Lassen NF  
Paul White, Lassen NF  
Ryan Tompkins, Plumas NF  
Gary Cline, Tahoe NF  
Kelly Hack, Tahoe NF

Teri Banka, Tahoe NF  
Anthony Balderas, Tahoe NF  
Bill Krips, Eldorado NF  
Bob Carroll, Eldorado NF  
Danee Post, Eldorado NF  
Laura Cheney, Eldorado NF  
Ron Friend, Stanislaus NF  
Eileen Carlen, Stanislaus NF  
Maria Benech, Stanislaus NF  
Francey Blaugrund, Sierra NF  
Dave Smith, Sierra NF  
Larry Burd, Sequoia NF  
George Powell, Sequoia NF  
John Springer, Sequoia NF  
Scott Kusumoto, Inyo NF  
Rita Mustatia, LTBMU  
Scott Parsons, LTBMU

Sincerely,

*/s/ Danny Cluck*

Daniel R. Cluck  
Entomologist  
Forest Health Protection  
NE CA Shared Service Area

cc: FHP – Regional Office, San Bernardino, Shasta – Trinity & Stanislaus NF

Table 1. Number of Douglas-fir tussock moth pheromone detection survey plots by trap catch for 1997 - 2009 for California.

Year	Total # of Plots	NUMBER OF PLOTS WITH AN AVERAGE MOTH CATCH PER TRAP OF:														
		0<10	10<20	20<25		25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<65	65<70	70<75	75+
1997	142	88	27	10		9	4	3	0	0	1	0	0	0	0	0
	100%	62%	19%	7%		6%	3%	2%			<1%					
1998	159	81	22	11		9	6	3	10	7	5	2	1	1	1	0
	100%	51%	14%	7%		6%	3%	2%	6%	4%	3%	<1%	<1%	<1%	<1%	
1999	159	126	20	5		3	2	2	0	0	0	1	0	0	0	0
	100%	79%	13%	3%		2%	1%	1%				1%				
2000	185	154	15	4		4	0	1	2	2	2	0	0	1	0	0
	100%	83%	8%	2%		2%		<1%	1%	1%	1%			<1%		
2001	183	95	57	13		10	6	0	1	1	0	0	0	0	0	0
	100%	52%	31%	7%		5%	3%		<1%	<1%						
2002	168	126	31	5		3	3	0	0	0	0	0	0	0	0	0
	100%	75%	18%	3%		2%	2%									
2003	163	53	42	11		11	10	14	13	3	1	4	0	1	0	0
	100%	32%	26%	7%		7%	6%	8%	8%	2%	1%	2%		1%		
2004	174	68	43	6		16	11	6	5	3	0	2	1	1	0	0
	* 93%	39%	25%	3%		9%	6%	3%	3%	2%		1%	<1%	<1%		
2005	195	139	15	11		7	4	3	2	3	1	0	0	0	1	1
	*95%	71%	8%	5%		4%	2%	2%	1%	2%	<1%				<1%	<1%
2006	164	98	26	8		8	5	3	4	3	4	2	0	1	1	1
	100%	60%	16%	5%		5%	3%	2%	2%	2%	2%	2%		<1%	<1%	<1%
2007	164	157	6	0		0	1	0	0	0	0	0	0	0	0	0
	100%	96%	4%				<1%									
2008	155	155	0	0		0	0	0	0	0	0	0	0	0	0	0
	100%	100%														
2009	147	144	3	0		0	0	0	0	0	0	0	0	0	0	0
	*93%	98%	2%													

\*some traps not counted due to weather

## **Appendix A: Forest Health Contacts**

### **Region 5, Forest Health Protection, Service Area Contacts**

#### **Northern CA (National Forests: Klamath, Mendocino, Shasta-Trinity, Six Rivers)**

Plant Pathologist: Pete Angwin  
(530) 226-2436  
e-mail: [pangwin@fs.fed.us](mailto:pangwin@fs.fed.us)

Entomologist: Cynthia Snyder  
(530) 226-2437  
e-mail : [clsnyder@fs.fed.us](mailto:clsnyder@fs.fed.us)

#### **Northeastern CA (National Forests: Lassen, Modoc, Plumas, Tahoe)**

Plant Pathologist: Bill Woodruff  
(530) 252-6680  
e-mail: [wwoodruff@fs.fed.us](mailto:wwoodruff@fs.fed.us)

Entomologist: Danny Cluck  
530-252-6431  
e-mail: [dcluck@fs.fed.us](mailto:dcluck@fs.fed.us)

Entomologist: Amanda Garcia-Grady  
530-252-6675  
e-mail: [amandagarcia@fs.fed.us](mailto:amandagarcia@fs.fed.us)

#### **South Sierra (National Forests: Eldorado, Inyo, LTBMU, Sequoia, Sierra, Stanislaus)**

Plant Pathologist: Martin MacKenzie  
(209) 532 3671 ext 242  
e-mail: [mmackenzie@fs.fed.us](mailto:mmackenzie@fs.fed.us)

Entomologist: Beverly M. Bulaon  
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e-mail: [bbulaon@fs.fed.us](mailto:bbulaon@fs.fed.us)

Entomologist: Joel Egan  
(209) 532-3671 x290  
e-mail: [jegan@fs.fed.us](mailto:jegan@fs.fed.us)

#### **Southern CA (National Forests: Angeles, Cleveland, Los Padres, San Bernardino)**

Plant Pathologist: Andi Koonce  
(909) 382-2673  
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Plant Pathologist: Paul Zambino  
(909) 382-2727  
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Entomologist: Tom Coleman  
(909) 382-2871  
e-mail: [twcoleman@fs.fed.us](mailto:twcoleman@fs.fed.us)

# **CAL FIRE, Forest Pest Management Contacts**

## **Cascade and Northern Sierra:**

Entomologist: Don Owen  
(530) 224-2494  
[don.owen@fire.ca.gov](mailto:don.owen@fire.ca.gov)

## **North Coast:**

Plant Pathologist: Jack Marshall  
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## **Central and Southern Sierra:**

Plant Pathologist: Tom Smith  
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## **South Coast and Southern CA:**

Forest Health Specialist: Kim Camilli  
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